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Author	永田, 佳子(Nagata, Yoshiko)
	松島, 美一(Matsushima, Yoshikazu)
	加留部, 善晴(Karube, Yoshiharu)
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showed that the intermediate was formed in Al(III) chelate mediated nonenzymatic reactions.

Divalent ions such as Cu(II) has been believed not to form the species under the same conditions. However, our recent study showed that in the reaction of pyridoxal, amino acid ester, Cu(II) and tripyridyl in a 1:1:1:1 ratio, the intense and long-lived (3 hr at room temperature) band at 500 nm was formed. The results show that the quinoid species was stabilized in a six-coordinated ternary Cu(II) complex.

## N-Pyridoxylidenehydrazine-N', N'-diacetic Acid

永田佳子,松島美一,加留部善晴\*

[International Congress on Chemical and Biological Aspects of Vitamin B<sub>6</sub> Catalysis (1987年6月, Turku, Finland) で発表]

N-Pyridoxylidenehydrazine-N', N'-diacetic acid (1), the hydrazone of hydrazine-N, Ndiacetic acid and pyridoxal, and related hydrazones were prepared and their Tc-99 m complexes were evaluated as hepatobiliary imaging agents. Sequential scintigrams of a rabbit after the i.v. administration the Tc-99 m complex of 1 indicated that the radioactivity was concentrated initially in the liver and kidneys. Within 30 min the radioactivity was excreted into the small intestine through the hepatobiliary route, though the Similar results were obtained with the Tc-99 m complex of liver image was still clear. an analog of 1, N-(3-hydroxy-4-pyridylmethylene)hydrazine-N', N'-diacetic acid (2). The results showed that the Tc-99 m complexes of 1 and 2 were good hepatobiliary tracers and that the vitamin B-6 activity of pyridoxal is unrelated to the usefulness as the tracer. However, the complexes were not satisfactory as the radiopharmaceuticals, since considerable radioactivity was present in the liver and kidneys. This may possibly be due to the presence of polymeric forms of Tc-99 m. Absorption spectra in solutions of 1 and related hydrazones and their metal chelates were analyzed in order to clarify the structural features.

\* 福岡大学薬学部